

# **Using Surveillance Data to Develop Training For Small Businesses in Maine**

**Kim C. Lim, Ph.D. MPH**  
**Maine Department of Labor**  
**Bureau of Labor Standards**



**Safety Works!**

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# Content of Presentation

- **Overview of the Bureau of Labor Standards (BLS) and SAFETYWORKS!**
- **Maine Occupational Research Agenda (MORA)**
- **The “why, what, who and how”**
- **Expected outcomes**
- **Summary**



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**“ A Safe Work Environment and Fair Wages”**

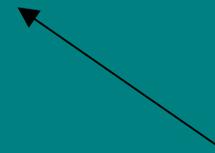
***Division of  
Technical Services***

***Division of  
Workplace  
Safety & Health***

**MDOL**  
**Bureau of  
Labor Standards**

***Division of  
Outreach & Education***

***Division of  
Wage & Hour***



# **Maine Occupational Research Agenda (MORA)**

**“ To Develop Occupational Safety  
& Health Research Priorities and  
Guide Their Implementation for  
Maine”**

# WHY?

**Perceived limitation and usefulness  
of injury data by small employers  
( $\leq 50$ )**

**Supplement conventional OSHA type  
of training which focus on standards  
and the use of the hierarchy of controls**

# WHO?

- **Safety professionals who have completed the 30-hour OSHA Safety & Health Course (29CFR 1910 or 1926)**

# **An Overview of the Learning Objectives**

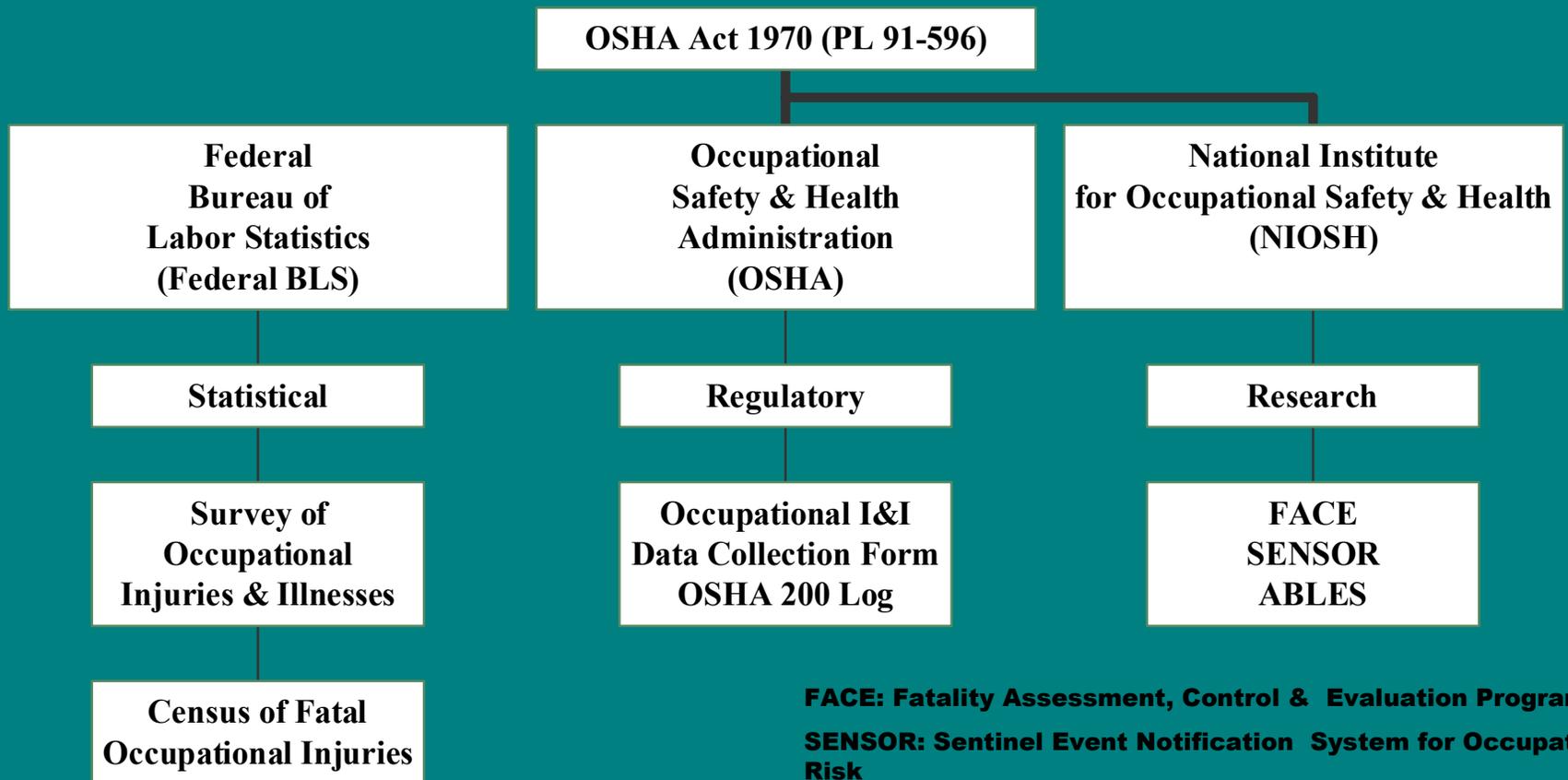
- **Who collects data on occupational injuries & illnesses? (quantitative data)**
- **Principles of the Haddon's Matrix & PRECEDE Model**
- **Examples of application of the Haddon's Matrix and PRECEDE Model to NIOSH case studies**
- **Practice session on how to apply these models to real life data (first reports of injuries and company profile)**
- **How to use the PRECEDE Model to develop an evaluation plan**

## **Learning Objective # 1:**

**Who collects data on occupational injuries & illnesses?**

# Who collects data on occupational injuries & illnesses?

## – Roles of Federal Agencies



**FACE: Fatality Assessment, Control & Evaluation Program**

**SENSOR: Sentinel Event Notification System for Occupational Risk**

**ABLES: Adult Blood Lead Epidemiology & Surveillance**

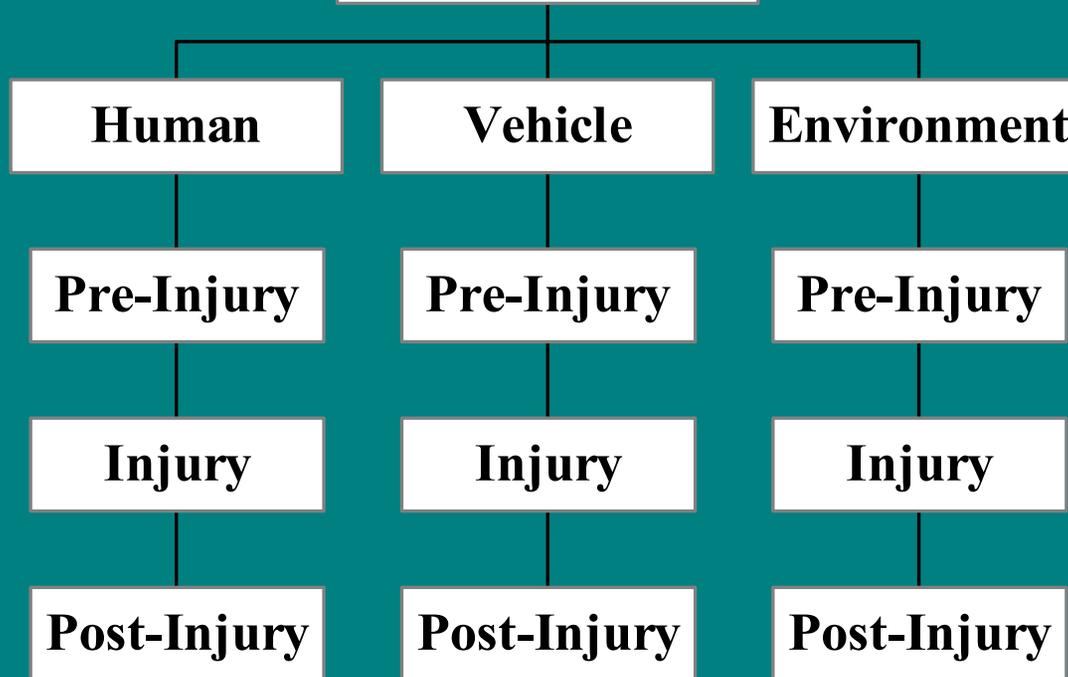
# Sources of Occupational Injury & Illness Data in Maine



## **Learning Objective # 2:**

**Application of the Principles  
of the Haddon's Matrix &  
PRECEDE Model**

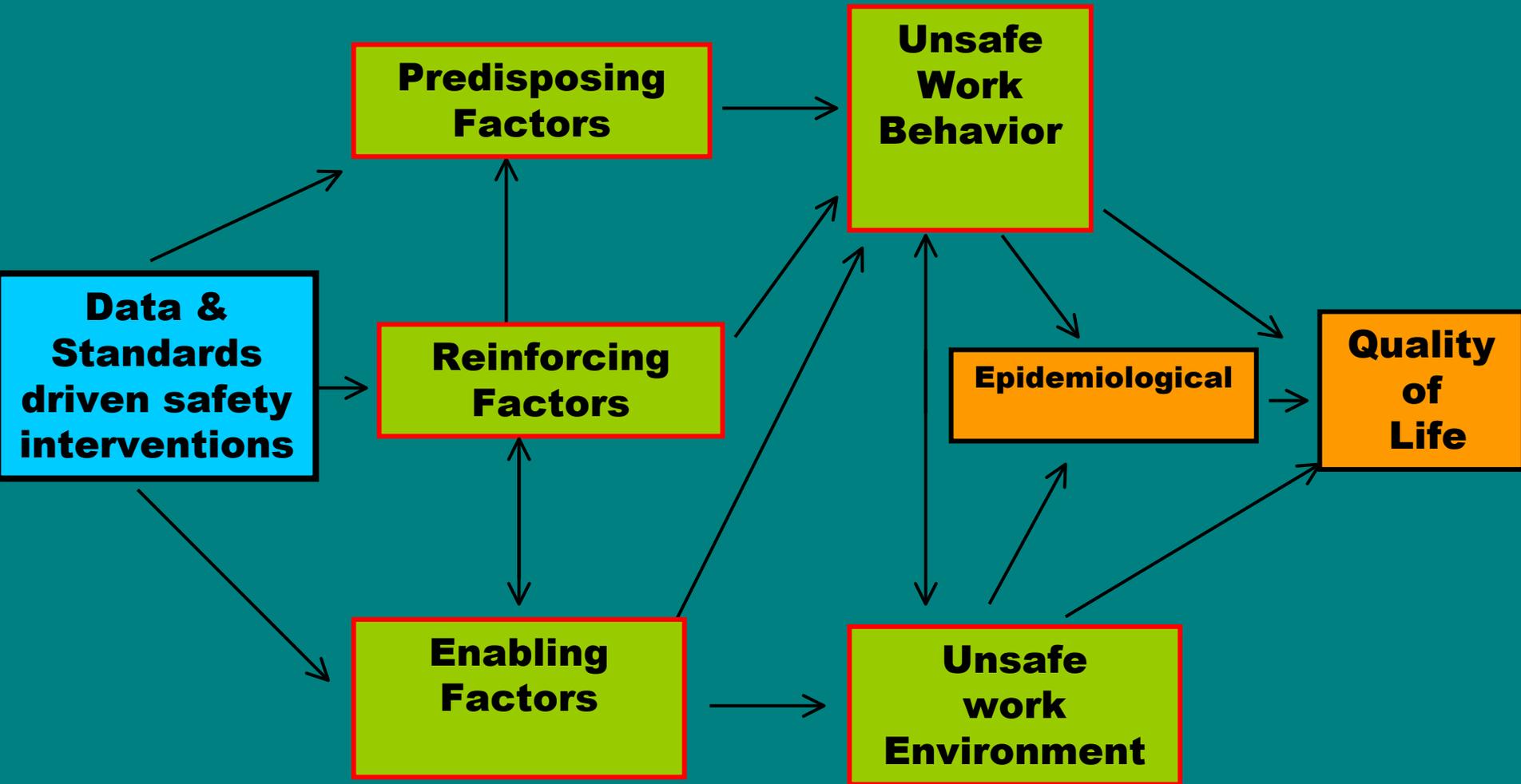
# Haddon's Matrix



# Haddon's Matrix

Phases	Human	Vehicle	Environment
<b>Pre-Injury</b>	Who? What? When & How?	Equipment? Chemicals? Co-workers?	Confined spaced? Height? Trench? Noise? Indoor? Outdoor?
<b>Injury</b>	Nature of Injury Illness?	How? Event? Cut? Impaled? Inhaled?	Was the environment a contributing factor? If YES? How?
<b>Post-Injury</b>	Outcomes short & long term effects	Outcomes short & long term effects	Any change after the incident?

# The PRECEDE Model for Developing Intervention & Evaluation



**Formative &  
Process  
Evaluation**

**Impact  
Evaluation**

**Impact  
Evaluation**

**Outcome  
Evaluation**

**Educational & Organizational  
Diagnosis**

**Predisposing Factors**

**Knowledge  
Attitudes  
Beliefs**

**safety practices  
attitudes toward safety performance  
perceived susceptibility  
control of own safety on the job**

**Enabling Factors**

**Access to resources  
Rules, Regulations & Policies**

**exposure to safety training  
instruction at initial employment  
availability of safety equipment  
pace of work**

**Reinforcing Factors**

**Different feedback  
Positive or Negative**

**management support  
management enforcement  
union & community  
family**

## **Learning Objective # 3:**

**Examples of application of the Haddon's Matrix and PRECEDE Model to NIOSH case studies**

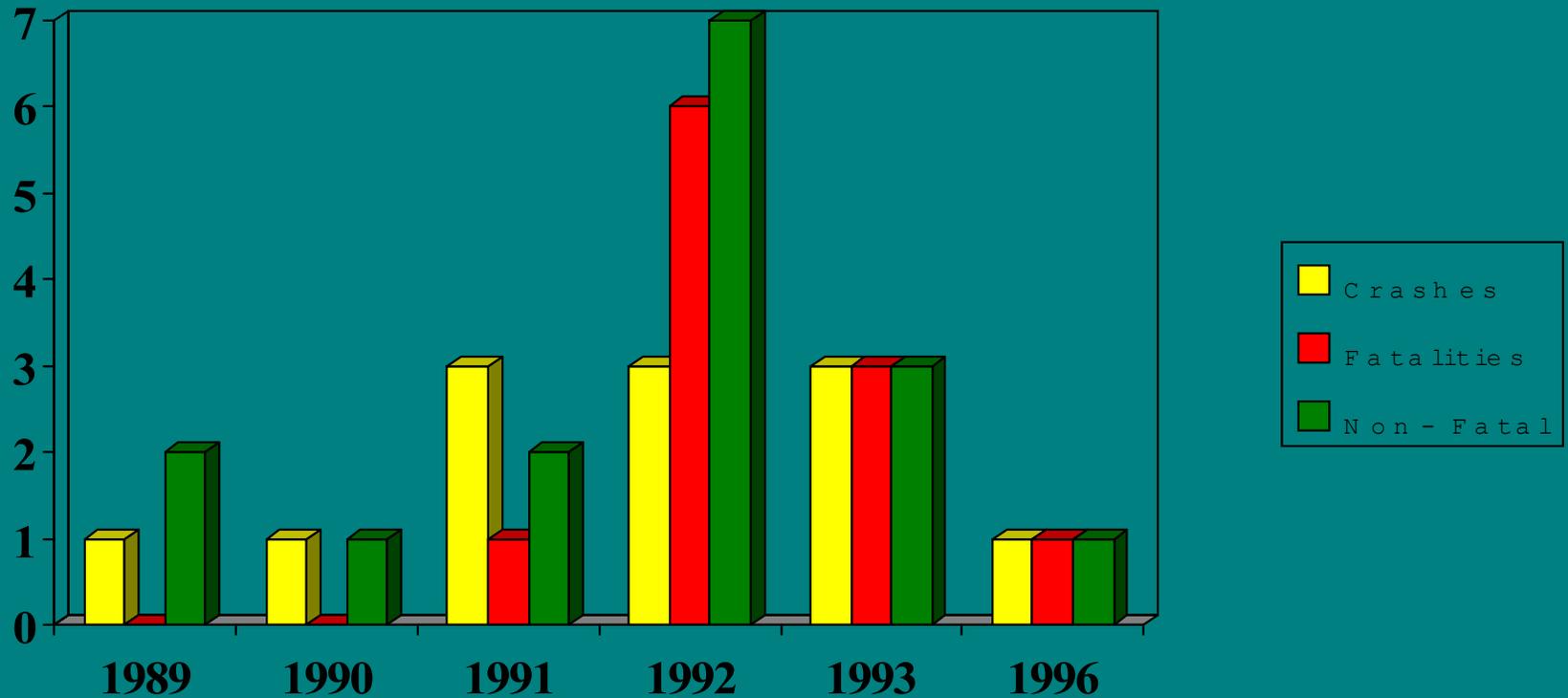
**Examples of the  
application of the  
Haddon's Matrix and the  
PRECEDE Model on NIOSH  
case studies**

# **Application of the Haddon's Matrix (FACE Case # 97-17)**

**On April 18, 1997, a 37-year-old male maintenance electrician (the victim) died when his lower torso was crushed between the nip barrier (a wire-mesh gate) and the upper frame of a paper re-winder machine at a paper-manufacturing facility**

**The incident occurred at a paper-manufacturing facility, employing approximately 1,000 workers, which produced finished paper from raw materials. The mill had been in operation at this site since 1918, changing ownership 5 weeks after the incident occurred.**

# Epidemiology of Heli-Logging Crashes in Alaska 1989-1996



Source: NIOSH, AK

# Application of the Haddon Matrix in Alaska Heli-Logging Crashes

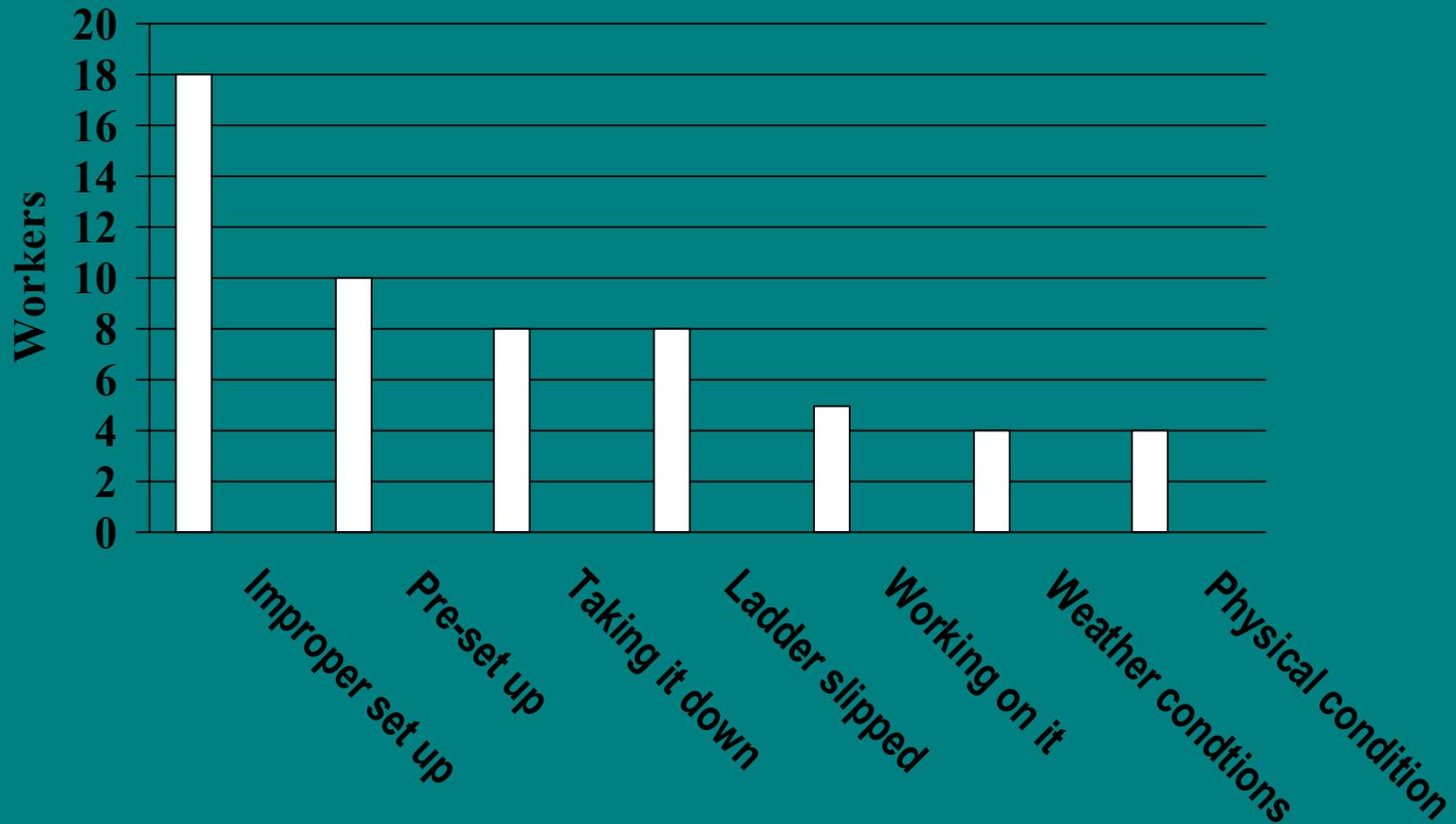
	Host/Human	Agent/Vehicle	Environment
<b>Pre-Event Pre-Injury</b>	Pilot-training Experience Fatigue, Stress Ground crew training and experience	<b>Heli-design</b> , Lift, Durability, Maintenance & Repairs, Engines & Controls, Ergo, Unstable Work Platform, Surplus * Improvised Equipment	Terrain, weather Landing zones Oversight FAA (CFR Pt. 133) Industry
<b>Event/Injury</b>	<b>Pilot</b> reaction to Emergency situation (autorotataion) <b>Ground crew</b> reaction/avoidance	<b>Helicopter</b> Autorotation Performance Deformation on impact, fire & explosions.	Terrain & Weather
<b>Post-Event</b>	Types of injury and Severity & fatalities		Little assistance Available EMS not available



## **Learning Objective # 4:**

**Practice session on how to apply these models to real life data (first reports of injuries and company profile)**

# Preliminary Epidemiological Profile of Extension Ladder Injuries 1993-1999 on Injuries sustained from the use of extension ladders (29CFR1910.26)

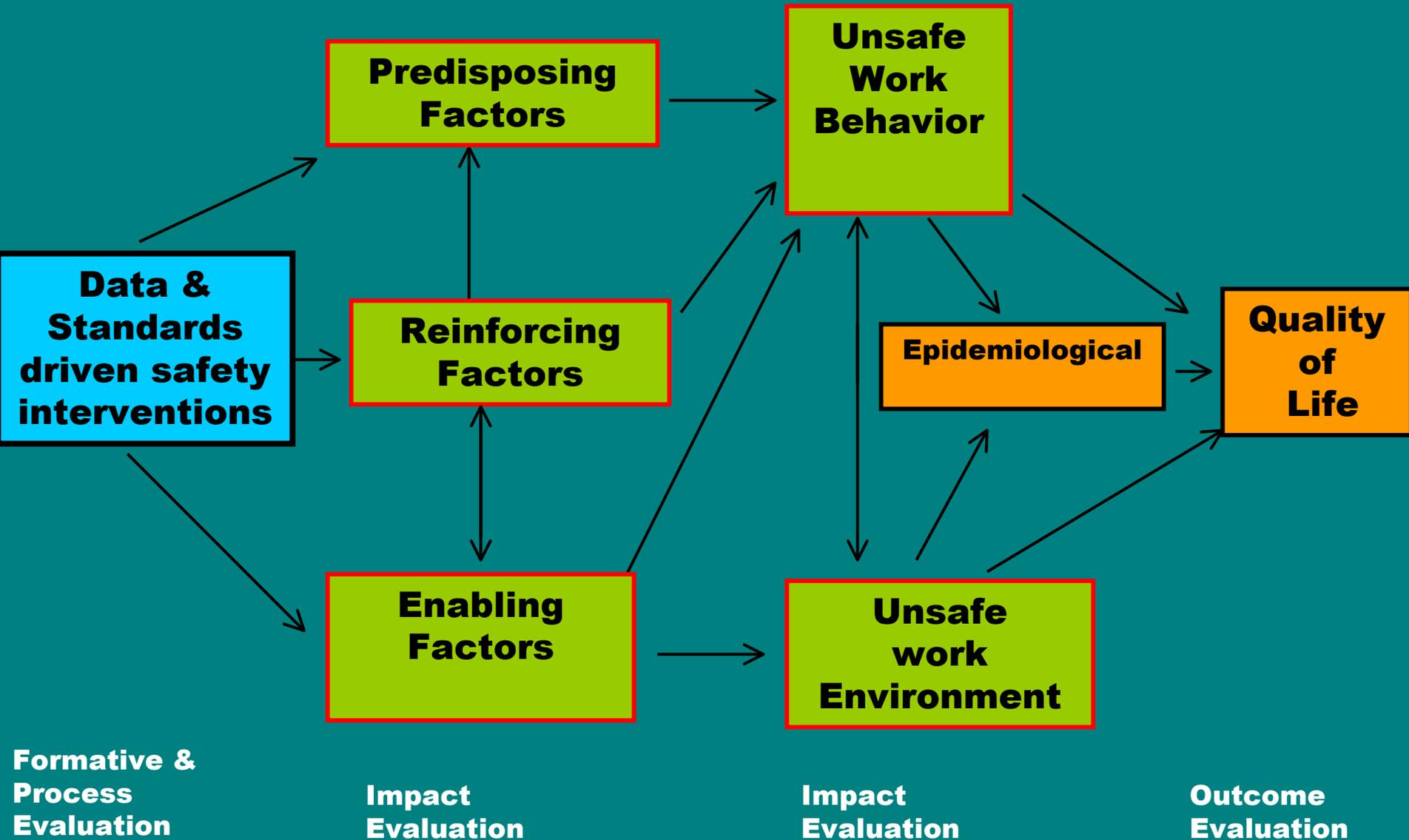


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## **Learning Objective # 5:**

**How to use the PRECEDE model  
to develop an evaluation plan**

# The PRECEDE Model for Developing Intervention & Evaluation



# Summary

- **Overview of the Bureau of Labor Standards (BLS) and SAFETYWORKS!**
- **Maine Occupational Research Agenda (MORA)**
- **The “why, what, who and how”**

# Expectations

- Safety professionals proficient in**
  - utilization of surveillance data and injury prevention models to supplement OSHA Standards in developing interventions**
  - conducting IEE and disseminating and sharing results**
- Increased collaboration between the Maine Bureau of Labor Standards and employers in safety and IEE research**

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